"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

SOV, 156-58-3-48/52

The Velocity of the Interaction of Nepheline With Aqueous Solutions of Sulfur Dioxide

SO_2 from gases with aqueous nepheline suspensions. There are 1 figure and 6 references, which are Soviet.

ASSOCIATION: Kafedra tekhnologii neorganicheskikh veshchestv Leningradskogo instituta im. Lensoveta
(Chair for the Technology of Inorganic Substances at the Leningrad Technological Institute imeni Lensovet)

SUBMITTED: January 8, 1958

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

SOV/156-58-4-47/43

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Bel'chenko, G. V., Tereshchenko, L. Ya.

TITLE: On the Rate and Mechanism of Nitric Acid Formation Under Foam Conditions (O skorosti i mekhanizme obrazovaniya azotnoy kisloty pri pennom rezhime)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 4, pp 794-798 (USSR)

ABSTRACT: Experimental investigations were carried out in order to determine the influence exerted by some hydrodynamic and physico-chemical factors upon the absorption process of nitrogen oxides in the foam apparatus. The kinetics and mechanism of the process were discussed. The influence exerted by the gas rate in the apparatus upon the degree of transformation of the nitrogen oxides to HNO_3 and the absorption coefficient were investigated. With increasing gas rate from 0.25-1.5 m/sec both processes are intensified. The absorption coefficient K rises from 900-2360 m/hour. The degree of transformation of nitrogen oxides into nitric acid drops from 44 % to 24 % due to a decrease of the contact

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

On the Rate and Mechanism of Nitric Acid Formation Under Foam Conditions SOV/156-58-4-47/49

between the phases. The dependence of the degree of transformation of NO_2 to HNO_3, of the initial content of NO_2, as well as the influence of the nitric acid concentration were investigated. The absorption of nitrogen oxides at an initial concentration of about 4 % NO rises up to 40 % HNO_3 on an increase of the nitric acid concentration. The increase is due to the catalytic effect of nitric acid during the oxidation of the nitrogen oxides. There are 4 figures and 6 references, 5 of which are Soviet.

ASSOCIATION: Kafedra tekhnologii neorganicheskikh veshchestv Leningradskogo tekhnologicheskogo instituta im. Lensoveta (Chair of Technology of Inorganic Substances at the Leningrad Technological Institute imeni Lensovet)

SUBMITTED: May 10, 1958

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

SOV/[illegible]-58-5-24/38

5(1, 2)

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Bel'chenk[illegible]

TITLE: Bromine and Iodine Desorption by Air Under Foam Conditions (Desorbtsiya broma i ioda vozdukhom pri pennom rezhime)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 5, pp 142-148 (USSR)

ABSTRACT: Although the production of elementary bromine and iodine by blowing with air from the lye is more economical than other methods, the apparatus used for it is complicated and has a low capacity. The production using foam showed good results in other absorption and desorption processes (Ref 1) and therefore offers also good prospects for bromine and iodine. The method of iodine desorption by air will make possible the standardizati[illegible] of the apparatus of iodine - bromine plants, a simplified handling, and a drop of the prime cost as soon as it will be introduced to industry. There are, however, no data in the descriptions of this process (Refs 5-7) which describe the rate of the iodine desorption by air under different conditions. This was the reason for the present paper. The authors used the apparatus previously described by them (Ref 8). All its elements

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

Bromine and Iodine Desorption by Air Under Foam Conditions

consisted of vinyl plastics, the foam apparatus was of plexiglass. Artificially produced lyes with different NaJ or NaBr amounts in an NaCl solution served as initial solutions. The iodide was oxidized to iodine by sodium nitrite solution which had earlier been brought up to pH 2.3 by sulfuric acid. The degree of desorption A, the degree of efficiency η of a bottom of the apparatus, and the desorption coefficient K were calculated from the analysis results of the liquid prior to and after passing the foam apparatus. As is known, A increases with the air volume f per one part of volume of the liquid. Table (p 144) shows the values of f used at different experimental conditions in dependence on the linear air velocity w at a liquid consumption of L = 25 liter/hour. This corresponds to the values of the intensity of the liquid current i = 0.63 m^3/m per hour, as related to the diameter of the discharge opening. The authors arrived at the following conclusions: 1) The efficiency of the foam use in the iodine and bromine blowing from a lye containing the two components proved to be high. 2) The value A amounts to 50-75% on a bottom of the foam apparatus at a w-value of from 1 to 3 m/sec. and at 35-40°.

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

Bromine and Iodine Desorption by Air Under Foam Conditions

depending on the magnitude of the i-value. In a temperature increase of from 12.5 to 35-40° the A value (at i = 0.63 m^3/m per hour) increases from 43 to 75%. 3) Within the range of w 1-3 m/sec. and at the said i-value the A amounts to 65% for bromine at 15°, and to 73% at 35-40°. At i = 2.52 and 3.58 m^3, per hour A for bromine depends upon w. The optimum specific consumption corresponding to the maximum of A is observed at w = 2 m/sec. 4) The K-values determined in dependence upon w for iodine and bromine in that apparatus point to the fact that the rate of iodine desorption processes under the conditions given was controlled by the resistance of the liquid phase; the desorption velocity of bromine is, on the other hand, controlled by the resistance of the liquid as well as of the gaseous phase. 5) The absolute values of K of iodine and bromine desorption in the foam apparatus are several dozen times higher than in scrubber apparatus. The capacity of a unit of volume of the foam apparatus is 8 times higher than that of a scrubber with a headpiece operating according to an (extensive) film process. The following scientists took part in the experiments: A. P. Lopatina, N. A. Petrova, and Y. S. [illegible]

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

Bromine and Iodine Desorption by Air Under Foam Conditions

gorad. There are 6 figures, 1 table, and 15 references, 13 which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta, Kafedra tekhnologii neorganicheskikh veshchestv (Leningrad Technological Institute imeni Lensovet, Chair of the Technology of Inorganic Substances)

SUBMITTED: November 25, 1957

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; BEL'CHENKO, G.V.

Desorption of bromine and iodine by air during foaming. Izv. vys.ucheb.zav.; khim. i khim.tekh. 1 no.5:142-148 '58. (MIRA 12:2)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.
(Bromine) (Iodine) (Desorption)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

Pozin, M. Ye.

BORUSHKO, I.M., inzh.; BOKHOVCHUK, M.M., inzh.; FIDEL'MAN, G.S., inzh.; POZIN, M.Ye., doktor tekhn. nauk; TARAT, E.Ya., kand. tekhn. nauk.

Foam dust collectors used at the concentration plant of the "Apatite" Combine. Bezop. truda v prom. 2 no.2:9-11 F '58. (MIRA 11:2)

1. Kombinat "Apatit" (for Borushko, Bokhovchuk, Fidel'man). 2. Leningradskiy tekhnologicheskiy institut im. Lensoveta (for Pozin, Tarat).

(Dust collectors)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.

Influence of the gas velocity on the mass transfer in bubbling and foam processes of absorption. Zhur.prikl. khim. 31 no.3:387-393 Mr '58. (MIRA 11:4)

1.Leningradskiy tekhnologicheskiy institut im. Lensoveta.
(Gases--Absorption and adsorption)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; GRIGOR'YEV, G.S.; KOPYLEV, B.A.; SOKOLOVA, A.D.

Rate of reaction of apatite with sulfuric acid following their intermixing. Zhur. prikl. khim. v. 31 no.5:693-701 My '58. (MIRA 11:6)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, Nevskiy khimicheskiy zavod.
(Sulfuric acid) (Apatite) (Chemical reaction, Rate of)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; PETROVA, M.A.

Absorption of ammonia by copper ammine solutions in the foam apparatus. Zhur. prikl. khim. 31 no.7:1007-1013 Jl '58. (MIRA 11:9)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.
(Ammonia) (Copper compounds) (Gas purification)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; TARAT, E.Ya.

Absorption kinetics of water vapor by sulfuric acid under turbulent (foam) conditions. Zhur. prikl. khim. 31 no.9:1332-1341 S '58. (MIRA 11:10)

1.Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Water vapor) (Sulfuric acid) (Absorption)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; MURATOVA, M.I.

Crystallization of potassium chloride from kainite lyes. Trudy LTI no.46:113-124 '58. (MIRA 14:4)
(Potassium chloride) (Crystallization)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; MUKHLENOV, I.P.; TARAT, E.Ya.; FOMKINA, T.A., tekhn.red.

[Froth apparatus for gas purification, heat exchange, and absorption; operation and calculation for froth apparatus] Pennye gazoochistiteli, teploobmenniki i absorbery; rabota i raschet pennykh apparatov. Leningrad, Gos.nauchno-tekhn. izd-vo khim.lit-ry, 1959. 122 p. (MIRA 12:12)
(Gas purification) (Chemical engineering)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

SOV/153-2-3-20/29

5(2)

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Varshavskiy, V. L.

TITLE: The Flotability of Gypsum and of a Precipitate With Different Reagents

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 3, pp 412-419 (USSR)

ABSTRACT: The authors investigated various enrichment reagents and regulators for the flotation of gypsum ($CaSO_4.2H_2O$) and the precipitate ($CaHPO_4.2H_2O$) to achieve a separation of the two substances by flotation. The investigations carried out showed the following results: in the presence of oleic acid (consumption: 750-1000 g/ton) and of IM-11 (consumption: 500-750 g/ton) the precipitate and gypsum were practically completely floated at pH 6.5-7. The flotability of the precipitate and gypsum by oleic acid decreases rapidly with the decrease of the pH value of the pulp. In the flotation with IM-11 a decrease of the pH value leads to a certain activation of the gypsum flotation and to a considerable reduction of the flotation of the precipitate. These effects of the pH value are shown by figure 2.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

The Flotability of Gypsum and of a Precipitate With Different Reagents

The anion reagent aeroflot-25 proved to be the most efficient among the flotation reagents investigated. In the presence of aeroflot-25 the precipitate is strongly floated whereas gypsum is hardly floated at all. The flotation of a precipitate-gypsum mixture differs from the flotation of the individual components since in the common presence of gypsum and precipitate in the liquid phase of the pulp a mutual inhibition of the flotability occurs. It was found that a reduction of the content of precipitate in the mixture leads to a considerable reduction of the flotation which is due to the inhibiting effect of gypsum on the flotation of the precipitate. The use of aeroflot-25 in the mixture with kerosene as collector for the basic flotation in the presence of copper salts and the processing of the residues with reagent IM-11 in the presence of trikresyl phosphate makes it possible to obtain a concentrate containing 29-30% P_2O_5 from the original mixture with a content of approximately 17% P_2O_5. In this case 79-80% of P_2O_5 are again obtained. Furthermore it was found that the use of trikresyl phosphate as peptizer in the processing of the residues

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

of basic flotation makes it possible to obtain a concentrate strongly enriched with P_2O_5. 2 tables show the results of flotation of precipitate gypsum mixtures with contents of 21.5% P_2O_5 (Table 1), and 17.2% P_2O_5 (Table 2), respectively, by Aeroflot-25 in the presence of copper sulphate. Table 3 shows the results of flotation of a precipitate gypsum mixture with 17.2% P_2O_5 by the addition of aeroflot-25 in 4 portions in the presence of kerosene and copper sulphate. Table 4 gives a survey on the processing of the residues obtained in basic flotation with the reagent IM-11 in the presence of trikresyl phosphate. Figure 8 shows a principal scheme of the separation of a precipitate-gypsum mixture by flotation with aeroflot-25 in the presence of kerosene and by the reagent IM-11 in the presence of trikresyl phosphate. There are 8 figures, 4 tables, and 4 Soviet references.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta Kafedra tekhnologii neorganicheskikh veshchestv (Leningrad Technological Institute imeni Lensovet, Chair of Inorganic

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

SOV/153-2-3-20/29

The Flotability of Gypsum and of a Precipitate With Different Reagents

Substances)

SUBMITTED: March 12, 1958

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; BEL'CHENKO, G.V.; TERESHCHENKO, L.Ya.

Absoprtion of nitrogen oxides by soda solutions under conditions of foaming. Izv.vys.ucheb.zav.; khim.i khim.tekh. 2 no.5: 803-809 '59. (MIRA 13:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.
(Nitrogen oxides)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

SOV/67-59-3-5/27

14(1)

AUTHORS: Pozin, M. Ye., Doctor of Technical Sciences, Professor, Mukhlenov, I. P., Doctor of Technical Sciences, Tarat, E. Ya., Candidate of Technical Sciences

TITLE: On the Height of the Initial Liquid Layer on the Bottom of a Sifting Apparatus (O vysote iskhodnogo sloya zhidkosti na tarelke sitchatogo apparata)

PERIODICAL: Kislorod, 1959, Nr 3, pp 26 - 31 (USSR)

ABSTRACT: The height of the initial layer is one of the most important parameters determining the operation of the bottom of a sifting apparatus. The rate of heat- and of mass exchange depends on the height H of the mixture of gas and liquid which forms at the bottom of the sifter (Refs 1,2). H is proportional to the h_o of the initial height. In this connection most of the authors do not consider the superelevation of the layer h_o over the discharge threshold which forms due to the intensive stream of liquid. In the papers by the authors (Ref 1) it was shown that also without threshold a considerable height H forms due to the stream. Other authors (Aksel'rod,

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

Usyukin, and Dil'man, Refs 8,9) assumed only low velocities of the liquid and a constant specific weight of the gas-liquid mixture. This changed, however, from 0.1 to almost 1. In this paper a method of determining h_o - for apparatus with a discharge device in which h_o depends on the height of the threshold h_S - , on the liquid stream i and on the diameter of the discharge opening, is described. The most simple case is a free discharge without discharge threshold (h_o depends only on i) a scheme with external discharge is shown on figure 1, a, with threshold and external discharge figure 1,b. 3rd case with consideration of the diameter of the discharge opening figure 1v ($H > a_c + h_S$). In the present investigations two models with a rectangular cross section and with a sifter of the dimensions 500 to 80 and 200 to 60 mm and a variation of the threshold from 0 to 40 mm, and a variation of the discharge opening from 40-120 mm was used. The sifters had circular or slotted openings. The intensity of the liquid stream was varied from 1-75 m^3/m hour. The experiments were made

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

On the Height of the Initial Liquid Layer on the Bottom of a Sifting Apparatus SOV/67-59-3-5/27

with air-water of 18-20° and with increasing temperature also with salt and acid solutions. Moreover, also the formulas for the determination of h_o (equations 1-13) are developed. The figures show the individual dependences in the variation of different parameters. h_o may be computed on general practical conditions according to formula $h_o = \psi h_s + \sqrt[3]{\varepsilon i^2}$, mm (8). ψ and ε may be determined from a comparison of the data of the two types of apparatus. A more general computation of h_o is then carried out which may be used for all gas-liquid systems in using different apparatus with a foam formation method (Equations 9-13). From this the equation for h_o was found: $h_o^{0.6} = 1.24\ H/w^{0.5}$, m (13) where w denotes the velocity of gas. There are 7 figures and 12 references, 11 of which are Soviet.

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

5(2) SOV/80-32-3-8/43

AUTHORS: Pozin, M.Ye., Kopyrev, B.A., Zhil'tsova, D.F.

TITLE: The Rate of the Decomposition of Apatite by Phosphoric Acid (O skorosti raslozheniya apatita fosfornoy kislotoy)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol XXXII, Nr 3, pp 509-515 (USSR)

ABSTRACT: The decomposition of apatite by phosphoric acid for the production of fertilizer in a cyclic process is studied here. The unreacted apatite was returned to the process. The apatite used had a content of 39.45% P_2O_5. The phosphoric acid was chemically pure. If the acid had a P_2O_5 content of 13.6%, the coefficient of decomposition reached 20.5% in the first hour, but only 2 and 1.5% respectively in the following 2 hours. A similar difference between the initial and final rate of decomposition may be observed at other concentrations. The decomposition by dilute acid was relatively slow. The optimum was obtained with acid containing 54% P_2O_5, a temperature of 40 - 60°C and a norm of 95 - 100% of the stoichiometric one. The coefficient of decomposition after 2 hours was 70% in this case.
There are 5 graphs, 1 table and 7 references, 5 of which are

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

SOV/80-32-5-8/45

The Rate of the Decomposition of Apatite by Phosphoric Acid

Soviet and 2 English.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: April 10, 1958

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

5(2) SOV/80-32-4-2/47

AUTHORS: Pozin, M.Ye., Kopylev, B.A., Zhil'tsova, D.F.

TITLE: On the Hydrolysis Rate of Monocalciumphosphate in Aqueous Solutions (O skorosti gidroliza monokal'tsiyfosfata v vodnykh rastvorakh)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 710-716 (USSR)

ABSTRACT: The decomposition of monocalciumphosphate by water is determined by the time of contact. At a salt:water ratio of 1.5 and 20°C the decomposition in the first 10 min is 32.5%, in the following 10 min-7.5%. For a ratio of 0.1 the figures are 10 and 1.7%, respectively. A higher temperature increases decomposition. At a ratio of 1.5 the decomposition within 2 hours reaches at 30°C 38.5%, at 50°C 55.4% and at 80°C 72.5%. At a ratio of 0.05 the corresponding figures are: 22.5%, 29.5% and 47.2%. In the presence of free phosphoric acid the degree of decomposition is considerably lower. At a temperature of 20°C and ratios of 0.75 and 0.5, decomposition could not be observed in the first 5 hours when free phosphoric acid was present. At 40°C hydrolysis started only after 3 hours. The hydrolysis rate decreases after an initial period which is explained by the saturation of the water with dicalciumphosphate.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

On the Hydrolysis Rate of Monocalciumphosphate in Aqueous Solutions

There are 7 graphs, 1 table and 8 references, 3 of which are Soviet, 2 American, 1 English, 1 French and 1 German.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: April 10, 1958

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

SOV/80-32-5-13/52

5(2)

AUTHORS: Pozin, M.Ye., Kopylev, B.A., Tarat, E.Ya.

TITLE: The Effect of the Height of a Foam Layer on a Sieve Plate on the Absorption of Carbon Dioxide by an Alkali Solution

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 5, pp 1004-1010 (USSR)

ABSTRACT: The hydrodynamic conditions of the treatment of a gas-liquid system on a sieve plate are determined by the linear speed of the gas and the liquid, by the quantity of the liquid on the plate and by the physical properties of the components of the system. Experiments on the absorption of CO_2 by solutions of caustic soda under foaming conditions were carried out in a glass column of 36 mm in diameter which was divided horizontally by a vinylplastic grid. The carbon dioxide was absorbed from air containing 6% CO_2 at 60°C by a 3 n NaOH solution. It has been shown that the concentration of CO_2 varying from 0-15% has no effect on foam formation. Figure 3 shows that the foam layer height is dependent on the gas speed. At constant gas speed the hydraulic resistance of the foam layer increases proportionally with its height, changing with the height of the initial

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

The Effect of the Height of a Foam Layer on a Sieve Plate on the Absorption of Carbon Dioxide by an Alkali Solution

layer of the liquid. The higher the gas speed in the apparatus, the lower is the specific gravity of the foam and the lower is also its hydraulic resistance. The coefficient of CO_2 absorption is proportional to the height of the foam. The rate of the absorption process is proportional to the energy consumed in the formation of the system. There are: 7 graphs, 1 diagram and 9 Soviet references.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: October 3, 1957

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

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75057
SOV/80-32-10-6/51

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Zhil'tsova, D. F.

TITLE: Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 10, pp 2164-2171 (USSR)

ABSTRACT: This is a study of the effect of acid concentration (Fig. 1), time (Fig. 2), temperature (Figs. 3 and 4), and H ion concentration (Fig. 5) on the apatite decomposition rate; industrial acid/phosphate ratios were used. The decomposition was found to occur in two stages. At the first and short stage, the rate is characteristic of chemical reactions in that it depends both on phosphoric acid concentration, acid/phosphate ratio, and on temperature within the 40-80° range. The decomposition rate peak shown in Fig. 1 is explained by an increase in the H ion concentration despite a decrease in dissociation up to this peak beyond which a sharp drop in dissociation lowers the decomposition

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rate. The H ion concentrations plotted in Fig. 5 were calculated from the formula:

$$C_{H^+} = K_s \cdot \frac{C_H}{C_c \cdot \alpha}$$

in which C_c, the $Ca(H_2PO_4)$ concentration, was determined graphically using the $CaO-P_2O_5-H_2O$ phase diagram. α was assumed equal to 1, so that Fig. 5 shows only the character of the rate-H ion concentration relation rather than the absolute value. Actually, since α decreases with increasing acid concentration, curve III should lie to the right of II, followed by V, VI, IV, and I. Only at the first stage is the decomposition rate, in agreement with Chepelevetskiy (Tr. NIUIF, 137 (1937)), proportional to H ion concentration. No single relation can describe the entire process. At the second stage, decomposition involves H ion diffusion through a $Ca(H_2PO_4)$ solid film. Examination of the shape of the 1/y

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vs $1/\tau$ curve (Fig. 6) indicates that the film is not the only factor retarding decomposition in the first 15 to 20 min; after that time, however, the film becomes the main retarding factor. The existence of two stages explains the small effect the acid/phosphate ratio and temperature within the 40-80° range have on the decomposition rate. Although an increase in the ratio prolongs the first stage by increasing the $Ca(H_2PO_4)$ solubility somewhat, a very large excess of acid is required to increase the decomposition rate markedly. At the second stage, since temperature rises within the 40-80° range have little effect on H ion diffusion rates and on $Ca(H_2PO_4)$ solubility, the decomposition rate is changed only slightly. There are 6 figures; and 8 Soviet references.

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Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid

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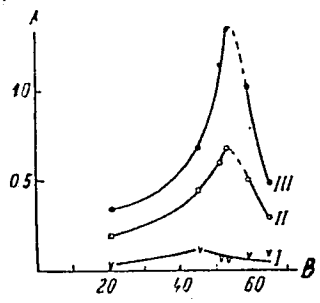

Fig. 1.

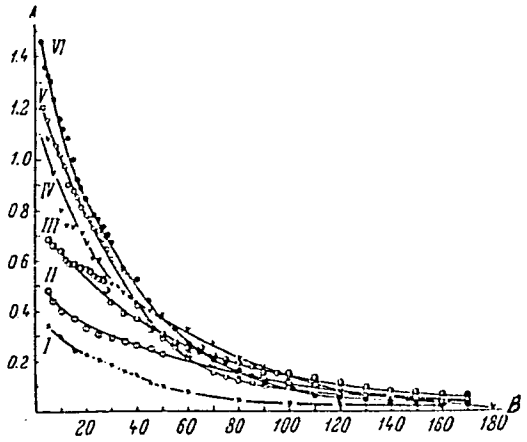

Fig. 2.

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Fig. 1. Isotherm-isochrons of the dependence of apatite decomposition rate on phosphoric acid concentration at 20° and with stoichiometric acid/phosphate ratio. (A) Decomposition rate (g/min); (B) acid concentration (% P_2O_5). Time (min): (I) 120, (II) 30, (III) 5.

Fig. 2. Change in the apatite decomposition rate with time. (A) Decomposition rate (g/min); (B) time (min). Acid concentration (% P_2O_5): (I) 21.0, (II) 64.77, (III) 45.6, (IV) 59.0, (V) 51.5, (VI) 53.6.

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Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid

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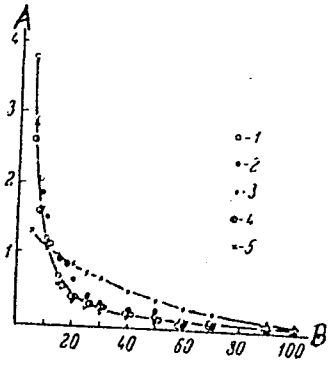

Fig. 3.

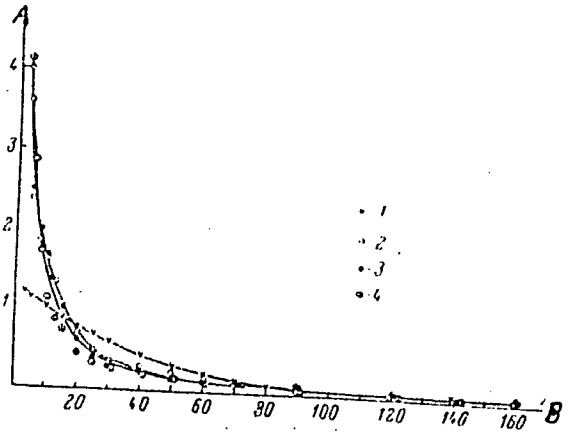

Fig. 4.

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Fig. 3. Rate of apatite decomposition by acid containing 53.6% P_2O_5 vs temperature. (A) Decomposition rate (g/min); (B) time (min). Temperature: (1) 40, (2) 50, (3) 60, (4) 70, (5) 20.

Fig. 4. Rate of apatite decomposition by acid containing 51.5% P_2O_5 vs temperature. (A) Decomposition rate (g/min); (B) time (min). Temperature (°C): (1) 20, (2) 40, (3) 50, (4) 60.

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Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid

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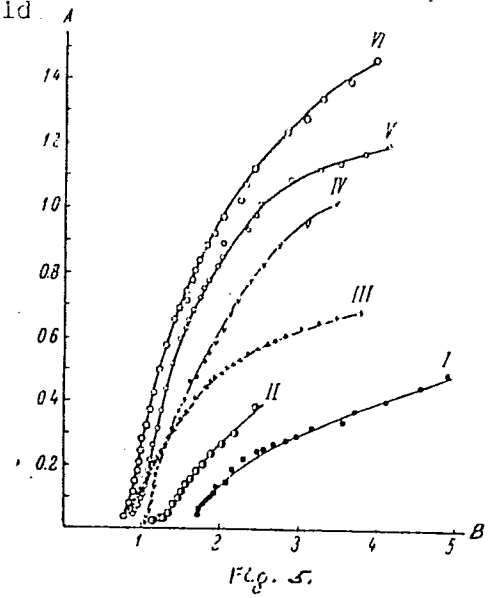

Fig. 5.

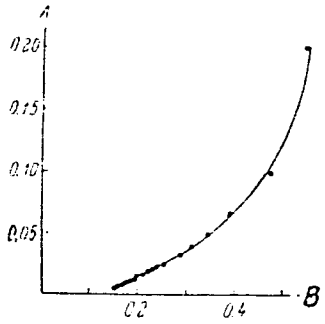

Fig. 6.

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Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid

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Fig. 5. Rate of apatite decomposition by phosphoric acid vs H ion concentration. (A) Decomposition rate (g/min); (B) H ion concentration (g-ion per liter x 10^{-2}). Starting acid concentration (% P_2O_5): (I) 64.77, (II) 21.0, (III) 45.6, (IV) 59.0, (V) 51.1, (VI) 53.6.

Fig. 6. 1/y vs $1/\tau$. (A) $1/\tau$; (B) 1/y: 10^{-1} (y is the % apatite decomposed by 59.0% P_2O_5 acid, τ is the time in min).

ASSOCIATION: Leningrad Technological Institute imeni Lensoveta (Leningradskiy tekhnologicheskiy institut imeni Lensoveta)

SUBMITTED: June 2, 1959

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye., KOPALEV, B.A., ZINYUK, R.Yu.

Investigation of the posibility of separating, by flotation, a precipitate-calcium sulfate mixture obtained from Kara-Tau phosphorites. Trudy LTI no.58:59-64 '59. (MIRA 13:7)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.
(Calcium sulfate) (Flotation) (Phosphorites)

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PHASE I BOOK EXPLOITATION SOV/5160

Batuner, Lev Mendelevich, and Maks Yefimovich Pozin

Matematicheskiye metody v khimicheskoy tekhnike (Mathematical Methods in Chemical Engineering) 3rd ed., rev. and enl, Leningrad, Goskhimizdat, 1960. 640 p. 10,000 copies printed.

Ed. (Title page): Maks Yefimovich Pozin, Professor; Ed.: A. M. Protasov; Tech. Ed.: T. A. Fomkina.

PURPOSE: This book is intended for chemical engineers, researchers, and manufacturers. It may also be used as a manual by students at chemical and engineering schools of higher education.

COVERAGE: The book presents methods for solving various problems in chemistry and chemical engineering with the aid of methods of higher mathematics. It gives numerous typical examples taken from laboratory and manufacturing practice. This edition differs from earlier editions in several ways. Chapters III and IV consider new phenomena; section 9 is newly added to Ch. VII; Chapters VI and XIII are new; Ch. XIV contains two new sections, 6 and 13;

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Chapters XV - XVIII are new and represent an expansion and rewriting of the former chapter "Statistical Calculation Methods"; and Ch. XIX has been greatly enlarged. Chapters I to XV, XVI (sections 3 - 19), XVII, XVIII (sections 2 - 9), and XIX (sections 4 - 17) were written by Docent L. M. Batuner, Candidate of Technical Sciences. Ch. XVI (sections 1 and 2), section 1 of Ch. XVIII, Ch. XIX (sections 1 - 3), and Ch. XX were written by Professor M. Ye. Pozin, Doctor of Technical Sciences. The authors thank the editor of the book, Docent A. M. Protasov, Candidate of Physical and Mathematical Sciences. There are 69 references: 57 Soviet (5 of which are translations), 10 English, and 2 German.

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POZIN, M.Ye.; KOPYLEV, B.A.; TARAT, E.Ya.; KARBANOV, S.G.

Absorption of sulfur dioxide in a foaming state. Izv.vys.ucheb. zav.;khim. i khim.tekh. 3 no.3:489-493 '60. (MIRA 14:9)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.
(Sulfur dioxide) (Absorption)

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POZIN, M.Ye.; KOPYLEV, B.A.; VAN LI-SHEN [Wang Li-sheng]

Metastable equilibria in the system $CaO - P_2O_5 - H_2O$. Zhur. prikl.khim. 33 no.7:1482-1491 Jl '60. (MIRA 13:7)

1. Leningradskiy tekhnologicheskiy institut im.Lensoveta.
(Calcium oxide) (Phosphorus oxide)

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POZIN, M.Ye.; KOPYLEV, B.A.; ZHIL'TSOVA, D.F.

"Superphosphate; physicochemical principles of its production" by M.L.Chepelevtskii, E.B.Brutskus. Reviewed by M.E.Pozin, B.A. Kopylev, D.F.Zhil'tsova. Zhur.prikl.khim. 33 no.7:1680-1681 Jl '60. (MIRA 13:7)

(Phosphates) (Chepelevtskii, M.L.) (Brutskus, E.B.)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; SEYTMAGZIMOV, A.

Rate of decomposition of Kara-Tau phosphorites by sulfuric acid. Zhur. prikl. khim. 33 no.9:1969-1976 S '60. (MIRA 13:10)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.
(Phosphorites)

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POZIN, M.Ye.; KOPYLEV, B.A.; VAN LI-SHEN [Wang Li-shêng]

Metastable equilibria in the system $Ca(NO_3)_2$ - H_2O. Zhur. prikl. khim. 33 no.12:2675-2684 D '60. (MIRA 14:1)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Calcium nitrate)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, Maks Yefimovich. Prinimali uchastiye: ARSEN'YEVA, L Z.; KAGANOVICH, Yu.Ya.; KLEBANOV, G.S.; KLEVKE, V.A.; KOPYLEV, B.A.; SOKOLOVSKIY, A.A.; MAKOVETSKIY, L.A., red.; GRIVA, Z.I., red.; ERLIKH, Ye.Ya., tekhn. red.

[Technology of mineral salts; fertilizers, pesticides, industrial salts, oxides and acids] Tekhnologiia mineral'nykh solei; udobrenii, pestitsidov, promyshlennykh solei, okislov i kislot. 2., izd. perer. i dop. pri uchastii: L.Z.Arsen'evoi i dr. Leningrad, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1961. 1008 p. (MIRA 14:10)
(Fertilizers and manures) (Salts)

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POZIN, M.Ye.; KOPYLEV, B.A.; BEL'CHENKO, G.V.

Absorption of nitrogen oxides by lime milk under bubbling and frothing conditions. Izv.vys.ucheb.zav.; khim.i khim.tekh. 4 no.1:102-107 '61. (MIRA 14:6)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.
(Nitrogen oxide) (Gases---Purification)

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POZIN, M.Ye.; KOPYLEV, B.A.; SEYTMAGZIMOV, A.; VIL'NITS, Ye.L.

Rate of decomposition of Kara-Tau phosphorites treated by the chamberless process (in nonthickening pulps). Zhur. prikl. khim. 34 no.2:259-265 F '61. (MIRA 14:2)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Phosphorites)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; SEYTMAGZIMOV, A.

Production of superphosphates from Kara-Tau phosphorites without the use of storage rooms (from nonthickening pulp). Zhur.prikl.khim. 34 no.8:1653-1661 Ag '61. (MIRA 14:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta. (Phosphates)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; VARSHAVSKIY, V.L.; PINTER, I.

Crystallization of calcium sulfate in the reaction of monocalcium phosphate with sulfuric acid in a phosphoric acid medium. Zhur. prikl.khim. 34 no.11:2384-2390 N '61. (MIRA 15:1)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Calcium sulfate)

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POZIN, Maks Yefimovich; KOPYLEV, Boris Aronovich; ZHIL'TSOVA, D.F., red.; LEVIN, S.S., tekhn. red.

[New methods of preparing mineral fertilizers] Novye metody polucheniia mineral'nykh udobrenii. Leningrad, Goskhimizdat, 1962. 233 p. (MIRA 16:2)
(Fertilizers and manures) (Phosphates)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

/080/62/035/003/001/024
D258/D30

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Tereshchenko, L. Ya. and Bel'chenko, G. V.

TITLE: The absorption of nitrogen dioxide by nitric acid

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 3, 1962, 473-482

TEXT: The authors studied the influence of NO_2 pressure, temperature, and acid concentration on the rate of NO_2 absorption by HNO_3 in a foaming column, operating under atmospheric pressure. Specifically, a stream of inert gas carrying N-oxides was bubbled through a solution of HNO_2 containing nitric acid in a laboratory-scale foaming apparatus. Foaming was produced by a grid, through which the liquid-gas mixture was carried. It was shown that NO_2 absorption increased sharply with the increase of its partial pressure, P_{NO_2}, up to P_{NO_2} = 0.03 atm; the absorption rate, V, was

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The absorption of nitrogen ...

expressed as follows:

$$K\left(\frac{P_i - P_f}{\ln \frac{P_i - P_p}{P_f - P_p}} - 0.0045\ a\right)$$

where P_i, P_f were the initial and final, partial pressures of NO_2 on entering and leaving the apparatus, and P_p - the equilibrium partial pressure of N-oxides over HNO_3 under the prevailing conditions. The relationship between the absorption coefficient K and the gas velocity W was found to be expressed by $k = C.W^{0.67}$; this relation was valid at P_{NO_2} below 0.01 atm., but K was independent

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The absorption of nitrogen ...

of HNO_3 concentration, C, at higher partial pressures of NO_2. The driving force of the process was found to be determined by the type of absorber and the equilibrium partial pressure of N-oxides. The absorption rate was almost doubled on raising the temperature from 10° to 50°C, while a three-fold increase in foam height caused this rate to increase by a factor of 2 to 3.5, depending on the gas velocity. The authors proved that the foaming process was from 2 to 4 times more effective than the film-type absorption of NO_2. There are 10 figures and 32 references: 20 Soviet-bloc and 12 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: E. D. Ermenc, Chem. Eng., 66, 4, 139 (1959); W. A. Dekker, E. Snoeck and H. Kramers, Chem. Eng. Sci., 11, 61, (1959); M. Peters and E. Koval, Ind. Eng. Ch., 51, 4, 577, (1959); G. G. Carberry, Chem. Eng. Sci., 9, 4, 189, (1959).

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

S/080/62/035/004/001/022
D267/D301

11.1160

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Tereshchenko, L. Ya. and Bel'chenko, G. V.

TITLE: Role of the degree of oxidation of nitrogen oxides during their conversion into nitric acid

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 4, 1962, 717-722

TEXT: During the manufacture of dilute HNO_3 in packed towers the degree of oxidation of the nitrogen-oxide-containing gas (the ratio of NO_2 to the sum of all oxides) in practice does not exceed 70 - 80%. Since the equilibrium pressure of nitrogen oxides is highly dependent on the degree of oxidation, the latter has a considerable effect on the driving force of the process. The authors demonstrated in an earlier paper (Ref. 5: Zhurnal prikladnoy khimii, v. 35, no. 3, 1962, 473) that the absorption of N oxides with a degree of oxidation = 1 can have a high effectiveness when using a froth cycle under atmospheric pressure. Using the apparatus

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D267/D301

described in the paper referred to above, the authors studied the effect of the degree of oxidation on the process of absorption of the oxide-containing gas at various conditions. The reduction of this degree results in a considerable decrease of the degree of conversion of oxides to HNO_3. The process of absorption of nitrogen oxides with various degrees of oxidation by HNO_3 of various concentrations is described by $V = K\overline{\Delta}$ at $\Delta P > 0.01$ atm. (where V is defined in the previous paper, and $\overline{\Delta}$ is the mean driving force of the conversion process). Although the variations of the degree of oxidation considerably affect the degree of conversion, yet the effect on the efficiency of the apparatus is rather small. The rise of temperature within 10 - 50°C reduces the absorption. By using the froth cycle one obtains a considerable intensification not only of the absorption process, but also of the process of oxidation of NO. There are 6 figures and 9 references: 8 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: P. G. Goudie and K. G. Denbigh, Trans. Far. Soc., 49, 1, 361, 1953, 39-52.

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Role of the degree ...

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

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POZIN, M.Ye.; KOVTUEV, B.A.; SAYFUDDINOV, [illegible]

Mechanism of decomposition of Kara-Tau phosphorite by sulfuric acid. Zhur.prikl.khim. 35 no.5:929-939 My '62. (MIRA 15:5)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Phosphorite) (Sulfuric acid)

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POZIN, M.Ye.; KOPYLEV, B.A.; NIKITINA, L.F.; DMITREVSKIY, B.A.

Possibility of reducing the consumption of dilute nitric acid in the decomposition of phosphates. Zhur.prikl.khim. 35 no.6: 1184-1191 Je '62. (MIRA 15:7)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta. (Phosphates) (Nitric acid)

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POZIN, M.Ye.; KOPYLEV, B.A.; ZINYUK, R.Yu.

Production of feed precipitate from superphosphate. Zhur. prikl.khim. 35 no.7:1415-1423 Jl '62. (MIRA 15:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Phosphates) (Feeding and feeds)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; TARAT, E.Ya.; ZUBOV, V.V.; TERESHCHENKO, L.Ya.

Rate and mechanism of absorption of nitrogen oxide by aqueous solutions of salts. Izv.vys.ucheb.zav.; khim. i khim. tekh. 6 no.6:974-981 '63. (MIRA 17:4)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; TERESHCHENKO, L.Ya.; BEL'CHENKO, G.V.

Oxidation of nitric oxide in the course of nitric acid production. (MIRA 15:12)
Zhur.prikl.khim. 35 no.11:2353-2359 N '62.

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Nitric acid) (Nitrogen oxide) (Oxidation)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; VAN LI-SHEN [Wang Li-shêng]

Metastable equilibria in the systems $Ca(NO_3)_2 - HNO_3 - H_2O$ and $CaO - P_2O_5 - H_2O_5 - H_2O$ at 50°C. Zhur.prikl.khim. 35 no.10:2134-2146 O '62. (MIRA 15:12)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta. (Systems (Chemistry)) (Phase rule and equilibrium) (Phosphates)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

S/080/63/036/001/002/026
D204/D307

AUTHORS: Pozin, M.Ye., Kopylev, B.A., Tereshchenko, L.Ya. and Bel'chenko, G.V.

TITLE: A method of calculating the composition of nitrogen oxides over solutions of nitric acid

PERIODICAL: Zhurnal prikladnoy khimii, v. 36, no. 1, 1963, 16 - 24

TEXT: A method is described for calculating the equilibrium conditions in the system aq.HNO - N oxides, which is useful in considering the equilibrium

$$3\,NO_2 + H_2O \rightleftharpoons 2\,HNO_3 + NO. \qquad (1)$$

The method is based on the construction of equilibrium curves of $P_{NO+NO_2} - P_{NO_2}$ (where $P_{NO_2} = p\,NO_2 + 2\,P_{N_2O_4}$, p's being partial pressures). These equilibrium lines are plotted with the aid of equation

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S/080/63/036/001/002/026
D204/D307

A method of calculating ...

$$P_{NO_2} = m \sqrt[3]{P_{NO}} \left(1 + n \sqrt[3]{P_{NO}}\right) \quad (5)$$

Values of m and n are tabulated for the temperature range from 10 to 80 °C, in steps of 5°, and for HNO_3 concentrations of 5 to 65%, in steps of 5%. Values of P_{NO_2} are tabulated, for P_{NO} of 0.001 to 0.2 atm, for the temperature range of 10 - 75 °C, and for HNO_3 concentrations of 5 to 60%. Nomograms are also given, for 30 and 35°C, which allow the determination of partial pressures and composition of N oxides over aq. HNO_3. Use of the method is illustrated with examples. A.P. Shubina assisted in the preparation of tables and nomograms. There are 2 figures and 2 tables.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: September 14, 1961

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; VAN LI-SHEN; SHISHKIN, G.I.

Rate of decomposition of apatite by nitric acid solutions of the system $CaO - P_2O_5 - N_2O_5 - H_2O$. Zhur.prikl.khim. 36 no.2:242-251 F '63. (MIRA 16:3)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Apatite) (Nitric acid) (Phosphates)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye., prof., doktor tekhn. nauk, red.

[Processes of chemical technology; hydrodynamics, heat and mass transfer] Protsessy khimicheskoi tekhnologii; gidrodinamika, teplo- i massoperedacha. Sbornik statei. Moskva, Nauka, 1965. 427 p. (MIR 18:12)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, Maks Yefimovich

[Technology of minera fertilizers] Tekhnologiia mineral'-
nykh udobrenii. Moskva, Khimiia, 1965. 432 p.
(MIRA 18:12)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye., doktor tekhn.nauk; TARAT, E.Ya., kand.tekhn.nauk; GREKHOV, I.I., kand.tekhn.nauk; TERESHCHENKO, L.Ya., kand.tekhn.nauk

Calculating the efficiency of the shelves of frothers for absorption and desorption processes. Khim. i neft. mashinostr. no.9:11-13 S '65. (MIRA 18:10)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; TARAT, E.Ya.; TERESHCHENKO, L.Ya.; ZUBOV, V.V.; TREUSHNIKOV, N.N.

Kinetics of nitrogen oxide absorption with aqueous salt solutions. Izv.vys.ucheb.zav.; khim.i khim.tekh. 8 no.4:628-632 '65. (MIRA 18:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; YEFREMOV, I.F.; VARSHAVSKIY, V.L.; MARKOVICH, A.S.

Coagulation processes in the production of superphosphates. Koll. zhur. 27 no.4:593-597 Jl-Ag '65.
(MIRA 18:12)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta
Submitted March 9, 1964.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; TALMUD, M.M.

Solubility in the system MgO - P_2O_5 - H_2O in its metastable state. Zhur.prikl.khim. 38 no.6:1267-1273 Je '65. (MIRA 18:10)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; TAIMUD, M.M.

Solubility and crystallization rate of dicalcium phosphate in the system $MgO - CaO - P_2O_5 - H_2O$. Zhur.prikl.khim. 38 no.9:1904-1909 S '65. (MIRA 18:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; TARAT, E.Ya.; MORARIU, I.

Height of the initial layer of highly foaming liquids on the grids of foam scrubbers. Izv.vys.ucheb.zav.; khim.i khim.tekh. 7 no.6:1003-1009 '64. (MIRA 18:5)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; [illegible], I.Ya.; NIKITINA, L.F.; DMITRIYEVSKIY, B.A.

Improvement of the complex fertilizer production of the Novomoskovsk Chemical Combine. Zhur. prikl. khim. 37 no.10:2089-2093 O '64. (MIRA 17:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, Novomoskovskiy khimicheskiy kombinat.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; TARAT, E.Ya.; OPEKUNOV, I.I.

Efficiency of mass-exchange apparatus as a function of hydrodynamic, physicochemical, and structural parameters. Zhur. prikl. khim. [illegible] 6:1292-1301 Je '64.

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; TARAT, E.Ya.; MORARIU, I.

Absorption rate of carbon dioxide by monoethanolamine under foaming conditions. Izv.vys.ucheb.zav.; khim. i khim.tekh. 7 no.2:240-245 '64. (MIRA 18:4)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; SHILLING, N.K.

Solubility in the system $NH_4H_2PO_4$ - NH_4NO_3 - $CO(NH_2)_2$ - H_2O.
Zhur. prikl. khim. 38 no.1:22-28 Ja '65. (MIRA 18:3)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; YADATSKAYA, Ya.K.

Rate of crystallization of calcium sulfate from its supersaturated sulfuric acid solutions. Izv.vys.ucheb.zav.; khim.i khim.tekh. 7 no.6:881-885 '64. (MIRA 18:5)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.

Some problems involved in the technology of mineral fertilizers.
Zhur. prikl. khim. 37 no.6:1160-1176 Je '64.
(MIRA 18:3)

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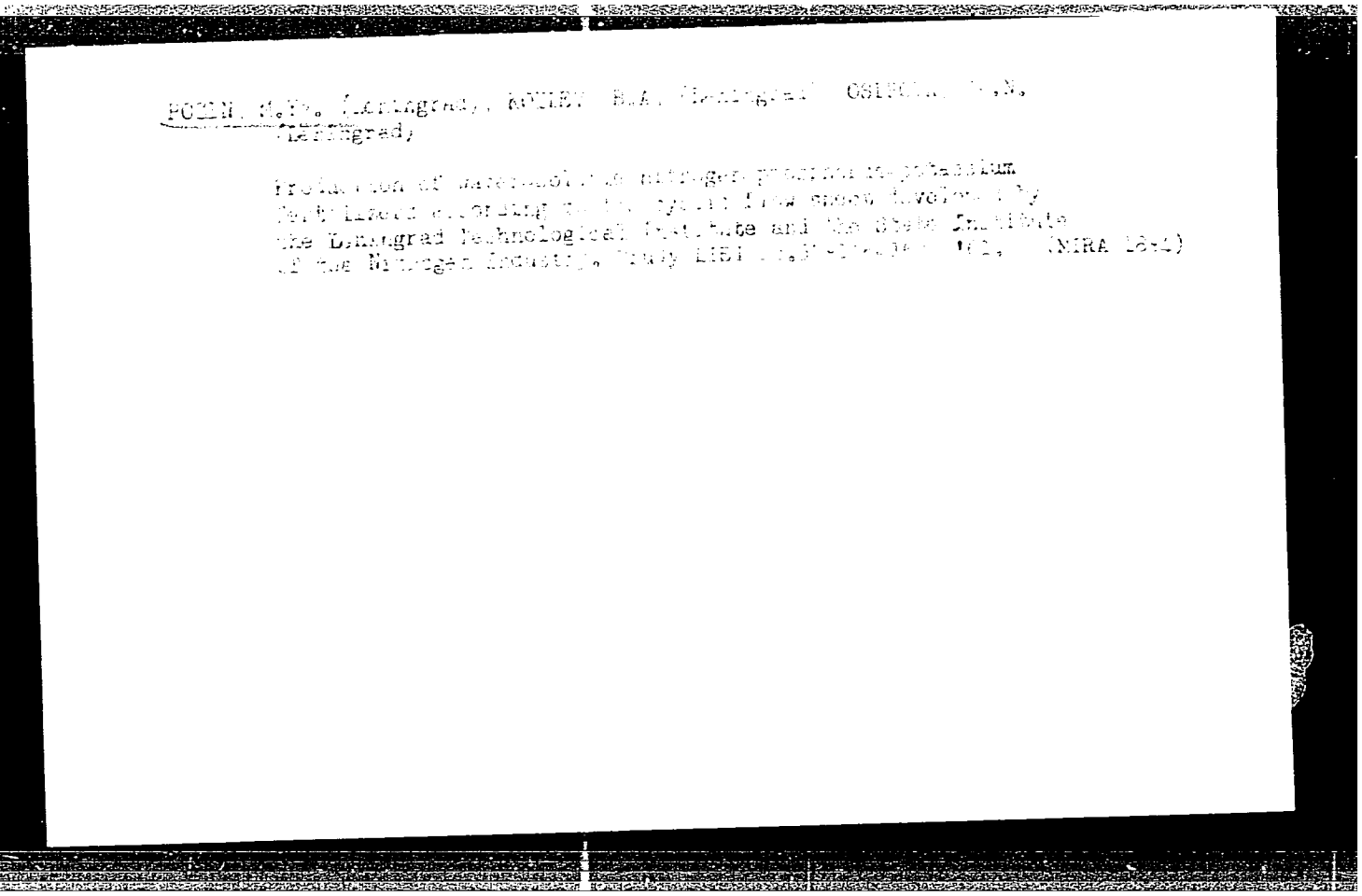

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M. Ye.; KOPYLEV, B.A.; YADATSKAYA, Ya.K.

Supersaturation of the system calcium oxide-sulfate-water with calcium sulfate. Izv. vys.ucheb. zav., khim. i khim. tekh. 7 no.5:699-704 '64 (MIRA 18:1)

1. Kafedra tekhnologii neorganicheskikh veshchestv Leningradskogo tekhnologicheskogo instituta imeni Lensoveta.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

MUKHLENOV, I.P.; POZIN, M.Ye.; TARAT, E.Ya.; AZBEL', I.Ya.; VOL'FKOVICH, S.I.; KUSKOV, V.K.

Bibliography. Zhur. prikl. khim. 36 no.12:2788-2792 D'63. (MIRA 17:2)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; TARAT, E.Ya.; OREKHOV, I.I.

Intensification of ammonia distillation from weak ammoniacal liquor. Kosk i khim. no.12:35-40 '63. (MIRA 17:1)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; ZUBOV, V.V.; TERESHCHENKO, L.Ya.; TARAT, E.Ya.; PONOMAREV, Yu.L.

Solubility of nitric oxide in aqueous solutions of some salts. Izv. vys.ucheb.zav.;khim.i khim.tekh. 6 no.4:608-616 '63. (MIRA 17:2)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta. Kafedra tekhnologii neorganicheskikh veshchestv.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M. Je. [Pozin, M. E.]

Gas treatment by foam column with the aid of liquids. Magy kem lap 19 no. 2:79-82 F '64.

1. "Lenszovjet" Technologiai Foiskola, Leningrad.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; VAN LI-SHEN[Wang Li-sheng]; KAGANOVICH, S.I.

Crystallization of $Ca(NO_3)_2 \cdot 4H_2O$ from metastable solutions of the system $Ca(NO_3)_2 - H_3PO_4 - HNO_3 - H_2O$. Zhur. prikl. khim. 34 no.5:994-1001 My '61. (MIRA 16:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Crystallization) (Calcium nitrate)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; TARAT, E.Ya.; MRNYAK, L.

Height of the initial layer of liquid on a tray of a foam apparatus with downcomers. Izv. vys. ucheb. zav.; khim. i khim. tekh. 6 no.3:490-497 '63. (MIRA 16:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.
(Plate towers)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; TARAT, E.Ya.; OREKHOV, I.I.

Ammonium absorption from coke gas in a bubble type apparatus.
Koks i khim. no.9:36-40 '62. (MIRA 16:10)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.
(Packed towers) (Ammonium) (Coke gas)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; TARAT, E.Ya.; MRNYAK, L.

Height of the initial layer of liquid on a grid tray of a foam apparatus. Izv. vys. ucheb. zav.; khim. i khim. tekh. 6 no.3: 485-489 '63. (MIRA 16:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.
(Pate towers)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; TERESHCHENKO, L.Ya.; BEL'CHENKO, G.V.

Method of calculating the equilibrium composition of nitrose gas over nitric acid solutions. Zhur.prikl.khim. 36 no.1:16-24 Ja '63. (MIRA 16:5)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta. (Nitric acid) (Nitrogen oxides)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, M.Ye.; KOPYLEV, B.A.; ZINYUK, R.Yu.

Formation of fluorine complexes of aluminum during acid treatment of phosphates. Izv.vys.ucheb.zav.;khim.i khim.tekh. 6 no.1: 98-105 '63. (MIRA 16:6)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta, kafedra tekhnologii neorganicheskikh veshchestv.
(Aluminum compounds) (Phosphates) (Fluorine compounds)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

AUTHOR: Pozin, M. V. (Moscow) SOV/10[illegible]-19-10-6/12

TITLE: On the Noise Stability in Pulse-Frequency Telemetering (O pomekhoustoychivosti chastotno-impul'snogo teleizmereniya)

PERIODICAL: Avtomatika i telemekhanika, 1958, Vol 19, Nr 10, pp 968-976 (USSR)

ABSTRACT: The mean deviation and the mean square error provide ample means for the characterization of the nose stability in telemetering. These deviations are determined and investigated in this paper. For this purpose the low-frequency unit of a receiver is investigated under the following conditions: 1) The equipment realizes the reception of pulses the duration of which equals half the period (that is to say the pulse admissivity is two) in a pulse frequency range extending from f_1 to f_2. 2) Only fluctuation noises are effective in this unit. 3) The low frequency unit of the receiver contains a low-pass filter with an upper frequency limit f_{lim} ($f_{lim} \gg f_2$), a double limiter, which on the level U_c selects a narrow band from the passing pulses. It also

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contains a pulse meter of this frequency, which is sensitive to pulses of random shape with a maximum pulse repetition frequency $f_{max} \geqslant f_{lim}$. The analysis of noise stability is carried out according to the method of "discretization" of the signal, f being the pulse repetition frequency. Formulae for the estimation of noise stability are deduced. They are simplified for the requirements of practical work. The results obtained are not only of use in the determination of the deviations but also in the estimation and selection of the frequency range of pulse frequency telemetering. The formulae (21) and (26) demonstrate that δ = mean deviation and δ^2 = mean square error are dependent upon the width of the range Δf and upon the position of this range in the section $0 \div f_{lim}$ of the low-pass filter. The mean deviation is small, if the range Δf is symmetrical about $f_{lim}/2$. It is shown that the same is true for the mean square error. It was also found that the more closely Δf approaches f_{lim}, the smaller will be the mean square error, This leads to the following conclusions: 1) A symmetrical distribution of Δf

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about $f_{lim}/2$ is considered expedient. 2) If the range Δf and the practically available frequency band are linked by some invariable relations, the noise stability will be the higher the more narrow the frequency band is. There are 4 figures and 2 references, which are Soviet.

SUBMITTED: September 31 (?), 1957

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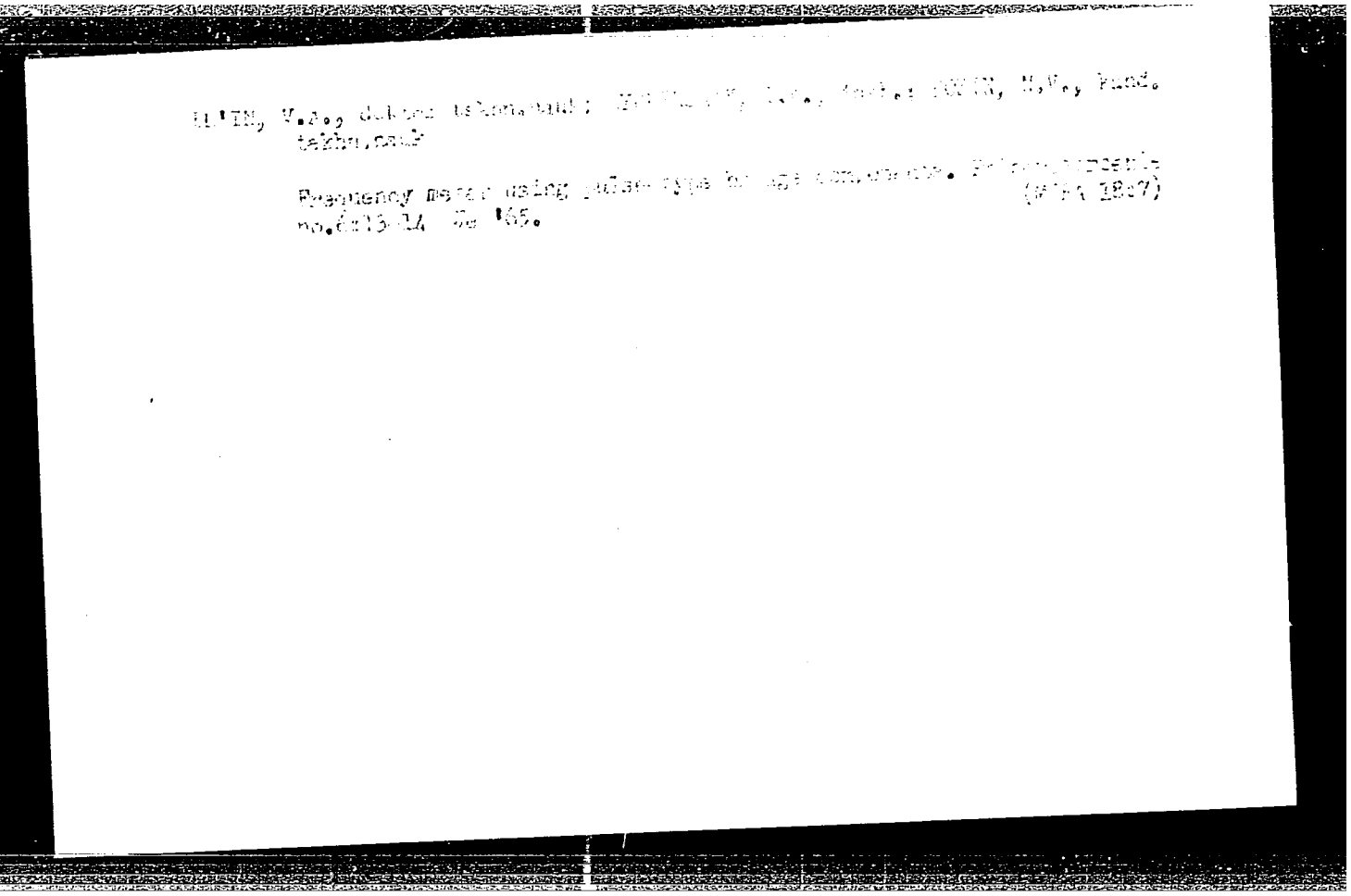

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, N.V. (Moskva)

Telemetering accuracy criteria with the action of interference from a communication channel. Avtom. i telem. 24 no.12:1712-1717 D '63. (MIRA 17:1)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

POZIN, N. V.

Dissertation defended at the Institute of Automation and Telemechanics for the academic degree of Candidate of Technical Sciences:

"Interference-Resistance and Effectiveness of Information Transfer in Telemetry."

Vestnik Akad Nauk, No. 4, 196?, pp. 119-145

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001342820011-9

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ACCESSION NR: AP5016772

UR/0286/65/000/010/0086/0087
681.14

AUTHOR: Pozin, N. V.; Lyubinskiy, I. A.

17
8

TITLE: A model of a neuron. Class 42, No. 171179

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 10, 1965, 86-87

TOPIC TAGS: bionics, neuron, electronic simulation

ABSTRACT: This Author's Certificate introduces: 1. A model of a neuron which contains input circuits and a generator unit in the form of a retarded blocking generator. Provision is made for simulating the mutual effect of processes in the dendrites and in the body of the neuron by using a storage circuit (e.g. using RC elements) at each of the inputs. 2. A modification of this model in which the output pulse frequency is proportional to the product of the frequency of the input signals. The storage circuit for each of the inputs is connected to the following input through a limiter, e.g. a diode, which limits the amplitude of the pulses fed to this input by a value which is equal to the voltage across the storage circuit. The storage circuit for the last input is connected to the control input of the generator unit. 3. A modification of this model which has two inputs. The average

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